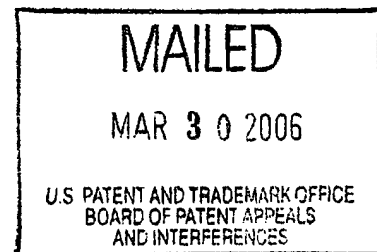


The opinion in support of the decision being entered today for publication and is not binding precedent of the Board.

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES



Ex parte PAUL GLOYER, GEORGE R. WALGROVE, III,  
CRISTINA DEJESUS and WILLIAM B. VREELAND

Appeal No. 2006-0739  
Application 09/802,760<sup>1</sup>

ON BRIEF

Before PAK, WARREN, and WALTZ, Administrative Patent Judges.  
PAK, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on an appeal from the examiner's final rejection of claims 1, 3 through 10, 25 through 33 and 47. Claims 11 through 24, 34 through 46 and 48, the only other claims pending in the present application, stand withdrawn from consideration by the examiner as being directed to a non-elected invention. We have jurisdiction pursuant to 35 U.S.C. § 134.

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<sup>1</sup> Application for patent filed March 8, 2001.

APPEALED SUBJECT MATTER

Claims 1, 25 and 47 are representative of the subject matter on appeal and read as follows:

1. A polyurethane elastomer comprising the reaction product of:

a polyisocyanate prepolymer formed by reacting an isocyanate with a polyol, said polyisocyanate prepolymer being present in an amount of from 45 to 70 weight percent based on total weight of the elastomer composition;

a polyether polyol prepolymer present in an amount of from 25 to 50 weight percent based on total weight of the elastomer composition; and

a hardener mixture comprising at least one additional polyol and at least one charge-control agent, the at least one charge control agent being a polyol capable of being copolymerized with the polyisocyanate prepolymer, the polyether polyol, and the hardener mixture, the hardener mixture being present in an amount of from 1 to 25 weight percent of the total elastomer composition,

the amounts of the polyisocyanate prepolymer, the polyether polyol, and hardener mixture being selected such that the equivalent ratio of hydroxyl functionality to isocyanate functionality is from 0.96 to 1.04.

25. A polyurethane elastomer comprising the reaction product of:

a polyisocyanate prepolymer formed by reacting an isocyanate with a polyol, said polyisocyanate prepolymer being present in an amount of from 45 to 70 weight percent based on total weight of the elastomer composition;

a polyether polyol prepolymer present in an amount of from 25 to 50 weight percent based on total weight of the elastomer composition; and

a hardener mixture comprising at least one additional polyol and at least one charge-control agent

capable of being copolymerized with the polyisocyanate prepolymer, the polyether polyol prepolymer, and the hardener mixture such that the charge-control agent is covalently bonded to the polyurethane elastomer, the hardener mixture being present in an amount of from 1 to 25 weight percent of the total elastomer composition,

the amounts of the polyisocyanate prepolymer, the polyether polyol prepolymer, and hardener mixture being selected such that the equivalent ratio of hydroxyl functionality to isocyanate functionality is from 0.96 to 1.04, and the charge-control agent is present in an amount of less than 2 weight percent based on total weight of the elastomer.

47. A polyurethane elastomer comprising:

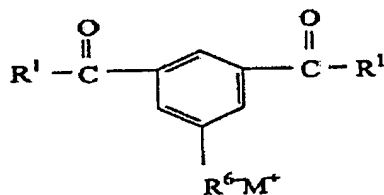
a polyisocyanate prepolymer formed by reacting an isocyanate with a polyether polyol, said polyisocyanate prepolymer being present in an amount of from 45 to 70 weight percent based on total weight of the elastomer composition;

a polyether polyol prepolymer present in an amount of from 25 to 50 weight percent based on total weight of the elastomer composition; and

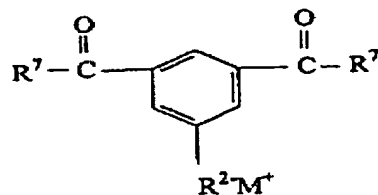
a hardener mixture comprising at least one additional polyol and at least one polyol charge-control agent, the hardener mixture being present in an amount of from 1 to 25 weight percent of the total elastomer composition;

the amounts of the polyisocyanate prepolymer, the polyether polyol prepolymer, and the hardener mixture being selected such that the equivalent ratio of hydroxyl functionality to isocyanate functionality is from 1.00 to 1.04, and the charge-control agent is present in an amount of less than 1 weight percent based on total weight of the elastomer, the polyol charge-control agent being selected from at least one of formula (I) or formula(II):

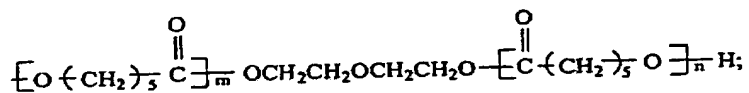
(I)



(II)



wherein R¹ represents:

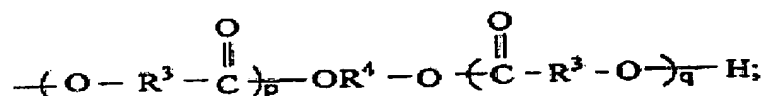


R⁶ represents sulfonate, oxyphenylene sulfonate, oxycyclohexylene sulfonate, or p-toluenesulfonamidosulfonyl;

R² represents oxyphenylene sulfonate, oxycyclohexylene sulfonate, or p-toluenesulfonamidosulfonyl;

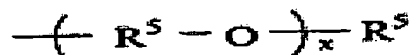
R⁷ presents:

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R<sup>3</sup> represents a straight or branched chain alkylene group having 2 to 7 carbon atoms;

R<sup>4</sup> is the same as R<sup>3</sup> or is



R<sup>5</sup> is the same as R<sup>3</sup>;

x is from 2 to 7;

m and n are integers which together are of sufficient value to achieve an R<sup>1</sup> weight average molecular weight of 300 to 30,000;

p and q in are integers which together are of sufficient value to achieve an R<sup>7</sup> weight average molecular weight of 300 to 30,000; and

M represents hydrogen, an alkali metal, ammonium, or P<sup>+</sup>(C<sub>6</sub>H<sub>5</sub>)<sub>3</sub>CH<sub>3</sub>.

#### PRIOR ART

The prior art references relied upon by the examiner are:

Chen et al. (Chen)	4,729,925	Mar. 8, 1988
Schlueter, Jr. et al. (Schlueter)	5,286,570	Feb. 15, 1994
Ramos et al. (Ramos)	0 604 334 A1	Jun. 29, 1994
(Published European Patent Application)		

REJECTIONS

Claims 1, 3 through 10, 25 through 33 and 47 stand rejected under 35 U.S.C. § 103(a) as unpatentable over the combined disclosures of Schlueter, Chen and Ramos.

OPINION

For the reasons set forth in the Brief and the Reply Brief, we reverse the aforementioned § 103 rejection. We add the following primarily for emphasis and completeness.

As evidence of obviousness of the claimed subject matter under § 103, the examiner relies on the combined disclosures of Schlueter, Chen and Ramos. See the Answer, page 3. According to the examiner (id.):

Schlueter discloses polyurethanes (example II) made from 50 wt.% prepolymer, 38 wt.% polyether polyol and 25 wt.% hardener comprising a polyol and less than 2 wt% of a charge control agent, and made at an NCO/OH ratio of 0.96 and having a resistivity value of  $3 \times 10^9$ . Schlueter differs from the claims by not showing a charge control agent that becomes chemically incorporated into the polyurethane molecule.

The examiner then relies on Chen and Ramos which are said to show the claimed charge control agent. Id. Based on these teachings, the examiner concludes (the Answer, page 4) that:

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the charge control agents of Chen and Ramos in the

polyurethane of Schlueter's formulation to prevent the charge control agent from leaching out.

The examiner's reasoning has two flaws. First, we observe that Example II of Schlueter relied upon by the examiner does not mention the amount of polyisocyanate prepolymer used in terms of a percentage based on the total weight of a polyurethane elastomer composition. See column 10, line 65 to column 11, line 38. However, the examiner has not explained how the percentage of polyisocyanate prepolymer used in Example II of Schlueter is obtained. See the Answer in its entirety. Nor has the examiner explained why the appellants' calculation of the percentage of polyisocyanate prepolymer used in Example II of Schlueter is incorrect. Compare the Brief, pages 16-21, and the Reply Brief, pages 1-3, with the Answer in its entirety.

Second, as urged by the appellants (the Brief, pages 7-15) Schlueter employs a particular polyurethane elastomer due to the type of a charge control agent employed. Schlueter teaches the importance of employing its particular charge control agent for the specific polyurethane elastomer described therein. See column 4, lines 26-43 and column 7, line 25 to column 8 line 8. However, the examiner has not adequately explained why one of ordinary skill in the art would have selected the particular

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polyurethane elastomer described in Schlueter with the charge control agents described in Chen and Ramos. In re Kotzab, 217 F.3d 1365, 1371, 55 USPQ2d 1313, 1317 (Fed. Cir. 2000) ("[P]articular findings must be made as to the reason the skilled artisan, with no knowledge of the claimed invention, would have selected the components for combination in the manner claimed."). From our perspective, to modify the polyurethane elastomer composition of Schlueter in the manner proposed by the examiner is to destroy the invention on which Schlueter is based. Ex parte Hartman, 186 USPQ 366, 367 (Bd. App. 1974).

On this record, we are constrained to agree with the appellants that the examiner has not carried the burden of establishing a prima facie case of obviousness. In re Oetiker, 977 F.2d 1443, 1445, 24 USPQ2d 1443, 1444 (Fed. Cir. 1992). Accordingly, we reverse the examiner's decision rejecting the claims on appeal under § 103(a).

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CONCLUSION

In view of the foregoing, we reverse the examiner's decision rejecting the claims on appeal under § 103(a).

REVERSED



CHUNG K. PAK )  
Administrative Patent Judge )



CHARLES E. WARREN )  
Administrative Patent Judge )

BOARD OF PATENT  
APPEALS AND  
INTERFERENCES



THOMAS A. WALTZ )  
Administrative Patent Judge )

CKP:sld

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